IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

: Docket 0074-535083

Alan James Coulson

: Confirmation No. 8160

U.S. Appln. No. 10/561,702

:

Filed: 05/22/2006

For: Narrowband Interference Suppression

for OFDM Systems

Commissioner for Patents Alexandria, Virginia 22313-1450

INFORMATION DISCLOSURE STATEMENT

In accordance with the provisions of 37 C.F.R. §1.56, Applicant hereby submits copies of the documents, other than issued US patents/patent applications, as identified in the attached Forms PTO/SB/08A and 08B.

Please note that this application is the U.S. national phase of International Patent Application No. PCT/NZ2004/000134, filed June 25, 2004. An International Search Report was established by the Australian Patent Office for this international application and a copy of the International Search Report was transmitted to the U.S. Patent and Trademark Office by the International Bureau.

Applicant respectfully requests full and proper consideration of the listed information during examination of the application, and that the listed information be printed on any patent which issues therefrom.

Respectfully submitted,

DANN, DORFMAN, HERRELL AND SKILLMAN

A Professional Corporation

Vincent T. Pace

PTO Registration No. 31,049

Tel.: 215-563-4100 Fax: 215-563-4044

e-mail: <u>vpace@ddhs.com</u>

Enclosures: Forms PTO/SB/08A and 08B;

AL Copies of listed documents, other than issued US patents/patent applications THROUGH /YT/

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO		Complete if Known		
		Application Number	10/561,702	
IN	FORMATION DISCLOSURE	Filing Date	05/22/2006	
	·	First Named Inventor	Alan James Coulson	
S	TATEMENT BY APPLICANT	Art Unit	A/e 2611	
(Use as many sheets as necessary)		Examiner Name	No Young Tse	
Sheet	1 of 2	Attorney Docket Number	0074-535083	

•			U. S. PATEN	DOCUMENTS	
Examiner Initials*	Cite No.1	Document Number Number-Kind Code ^{2 (ff known)}	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		^{US-} 2003/0235254	12/25/2003	FANSON ET AL.	·
		^{US-} 6,426,983	07/30/2002	RAKIB ET AL.	707.11
		^{US-} 6,473,453	10/29/2002	WILKINSON	
		^{US-} 6,757,241	06/29/2004	JONES ET AL.	
		US-			
		US-		Complete in Agent	
		US-			
		US-			
		US-			
, ,,,,,,	1.7.	US-			
		US-			

		FOREK	IN PATENT DOCU	JMENTS		
Examiner initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	s
		Country Code ³ "Number ⁴ " Kind Code ⁵ (if known)	IVIIVI*DO-1177		Of Relevant Figures Appear	<u> </u>
		WO 02/101953	12/19/2002	BROADCOM CORPORATIO		
		EP 1 176 731	01/30/2002	TEXAS INSTRUMENTS INC.	•	
,		EP 1 202 468	05/02/2002	HITACHI KOKUSAI ELECTR		
		WO 03/090422	10/30/2003	CONEXANT SYSTEMS INC.	, ,	
		EP 0 126 179	11/28/1984	SUMITOMO SPECIAL META		
		WO 02/069515	09/06/2002	MAGIS NETWORKS INC.		

-		
Examiner	Date	
Signature	Considered	
"		

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.cov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁶ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁸ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Approved for use through 03/31/2007, OMB 0651-0031 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number. Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Complete It Known				
Application Number	10/561,702			
Filing Date	05/22/2006			
First Named Inventor	Alan James Coulson			
Art Unit	n/a			
Examiner Name	n/a			
Attorney Docket Number	0074-535083			

Examiner Initials*	Cite	Document Number	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where Relevant Passages or Relevant
Initials*	No.1	Number-Kind Code ^{2 (# known)}	MM-DD-YYYY	Applicant of Cited Document	Relevant Passages or Relevant Figures Appear
		US-			
		US-			
		US-		•	
		US-			**
		US-		***************************************	
		US-			· · · · · · · · ·
		US-			
		US-	· · · · · ·		
		US-			
		US-		· (* 1130 tan	
		US-			
		US-			

	FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No.1	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages		
		Country Code ³ Number ⁴ Kind Code ⁵ (if known)	MM-DD-YYYY		Or Relevant Figures Appear	T ⁶	
		WO 02/23781	03/21/2002	industrial research limit			
						L	
				1	1	i	

Examiner		Date	
Signature		Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. *Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. *Applicant is to place a check mark here if English language Translation is attached.

This collection of Information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitu	Substitute for form 1449/PTO		Complete if Known		
Justin				Application Number	10/561,702
			CLOSURE	Filing Date	05/22/2006
STA	TEMENT E	BY A	PPLICANT	First Named Inventor	Alan James Coulson
	(Use as many she	ets as n	ecessary)	Art Unit	n/a
(USB as many shoets as necessary)				Examiner Name	n/a
Sheet	1	of	2	Attorney Docket Number	0074-535083

	_	NON PATENT LITERATURE DOCUMENTS	
Examiner initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
		M.G. Amin et al., "Optimum Interference Excision in Spread Spectrum Communications Using Open-Loop Adaptive Filters," IEEE, 07/1999	
		R. Nilsson et al., "A Narrow-Band Interference Canceller for OFDM-based Systems," 4th Euro. Personal Mobile Comm. Conf., 02/2001	
		G.J. Saulnier et al., "Performance of a Spread Spectrum OFDM System in a Dispersive Fading Channel with Interference," IEEE, 10/1998	
		J.A. Young et al., "Performance Metrics for Windows Used in Real-Time DFT-Based Multiple-Tone Frequency Excision," IEEE, 03/1999	
		S. Kapoor et al., "Interference Suppression in DMT Receivers Using Windowing," IEEE, 06/2000	
		L.B. Milstein et al., "An Analysis of a Real-Time Transform Domain Filtering Digital Communication System - Part I: Narrow-Band Interference Rejection," IEEE, 06/1980	
		S.D. Sandberg, "Adapted Demodulation for Spread-Spectrum Receivers which Employ Transform-Domain Interference Excision," IEEE, 09/1995	
		G. Carron et al., "Comparison of Two Modulcation Techniques Using Frequency Domain Processing for In-House Networks," IEEE, 02/2001	
		K. Witrisal, "Impact of DC-offsets and Carrier Feed-through on Correlation-based Frequency Synchronization for OFDM," 6th Intl. OFDM-Workship 2001	
		D. Gerakoulis et al., "An Interference Suppressing OFDM System for Wrieless Communications," IEEE, 04/2002	

Examiner	Marria Tagi	Date	06/07/2000
Signature	/Young Ise/	Considered	06/07/2009

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of Information is required by 37 CFR 1.98. The Information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gethering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO:

Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Substitut	te for form 1449/PTO			Complete if Known		
, , ,				Application Number	10/561,702	
INF	DRIMATION	DIS	CLOSURE	Filing Date	05/22/2006	
STA	TEMENT E	BY A	PPLICANT	First Named Inventor	Alan James Coulson	
	(Use as many she	ate se n	accessed	Art Unit	π/a	
	(Ose as many sire	ets as 11	ecessary)	Examiner Name	n/a	
Sheet	2	of	2	Attorney Docket Number	0074-535083	

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	1 1		T²
		M. Kuhn et al., "Linear block codes for frequency selective PLC channels with colored noise and multiple narrowband interference," IEEE, 2002	
		R.W. Lowdermilk et al., "Interference Mitigation in Orthogonal Frequency Division Multiplexing (OFDM)," IEEE, 09/1996	
		S.J. Howard, "Narrowband Interference Rejection Using Small FFT Block Sizes," IEEE, 10/1992	
		J.G. Proakis, "Intererence Suppression in Spread Spectrum systems," IEEE 09/1996	
		H-F Hsiao, "Narrow-Band Interference Rejection in OFDM-CDMA Transmission System," IEEE, 1998	
,			

			The state of the s
Examiner	Nouna Tool	Date	00/00/0000
Signature	/Young Ise/	Considered	06/08/2009

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: